

Patent Claims

1. Method for producing a portable data carrier with a display device, in particular a chip card with display, comprising the steps:
 - providing a semifinished product with conductive paths (18) disposed in the interior,
 - producing a recess (21) in the semifinished product,
 - uncovering countercontact surfaces (26) of the conductive paths (18) in the recess (21),
 - applying a reflection layer (23) onto the base surface (22) of the recess (21),
 - inserting a display (1) into the recess (21), so that the display (1) together with the reflection layer (23) forms a reflective display, and
 - contacting the countercontact surfaces (26) with contact surfaces (6) of the display (1).
2. Method according to claim 1, characterized in that the recess (21) is formed in a multi-step fashion, the countercontact surfaces (26) being uncovered on a step (25) of the multi-step recess (21) located above the base surface (22).
3. Method according to claim 1 or 2, characterized in that the contact surfaces (6) of the display (1) and the countercontact surfaces (26) of the recess (21) are contacted by means of an anisotropic electroconductive adhesive (13).
4. Method according to any of the claims 1 to 3, characterized in that the display (1) is inserted into the recess (21) in such a way that it is flush with a surface (20) of the semifinished product.
5. Method according to any of the claims 1 to 4, wherein gaps between the recess (21) and the display (1) inserted into the recess are sealed with a filling.

6. Portable data carrier with display device, in particular chip card with display, comprising a card body (19) with conductive paths (18) disposed in the interior of the card, a recess (21) located on a top side of the card (20), which accommodates a display (1), countercontact surfaces (26) in the recess (21), which are formed by the conductive paths (18) and which are contacted to contact surfaces (6) of the display (1), and a reflection layer (23) applied onto a base surface (22) of the recess (21), characterized in that the contact surfaces (6) of the display (1) are directed towards the base surface (22) of the recess (21).
7. Data carrier according to claim 6, characterized in that the recess (21) is formed in a multi-step fashion, wherein the countercontact surfaces (26) are formed on a step (25) of the multi-step recess (21) disposed between top side of the card (20) and base surface (22) and wherein the display (1) has a corresponding step with contact surfaces (6) formed thereon.
8. Data carrier according to any of the claims 6 or 7, characterized in that the contact surfaces (6) and countercontact surfaces (26) are connected with an anisotropic electroconductive adhesive (13).
9. Data carrier according to any of the claims 6 to 8, characterized in that the display (1) is flush with the top side of the card (20).
10. Method for producing a portable data carrier with a display device, in particular a chip card with display, comprising the steps:
 - providing a semifinished product with conductive paths (18) disposed in the interior,
 - providing a display (1) with a bottom carrier substrate (2), a conductive path layer (5), on which are formed contact surfaces (6) for connecting to countercontact surfaces (14), as well as a top carrier substrate (3),
 - applying a reflection layer (23) onto the top carrier substrate (3) of the display (1),

- producing a recess (21) in the semifinished product,
- uncovering countercontact surfaces (26) of the conductive paths (18) in the recess (21),
- inserting the display (1) into the recess (21), so that the reflection layer (23) rests on the base surface (22) and at the same time the contact surfaces (6) rest on the countercontact surfaces (26).